

U.S. Patent Application Serial No. 10/802,027
Amendment filed August 6, 2007
Reply to OA dated May 16, 2007

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A filter for trapping foreign matter comprising:

an inflow chamber into which a fluid flows;

an outflow chamber from which flows the fluid that has flown into said inflow chamber; and

a filter element of a substantially cylindrical shape partitioning said two chambers, wherein

said inflow chamber has a structure arranged such that the fluid that flows into said inflow chamber is spouted up from a bottom portion of said inflow chamber in a rising flow that is directed ~~in a taper-like fashion~~ toward the substantially cylindrically shaped surface of said filter element.

Claim 2 (Previously Presented): The filter for trapping foreign matter of claim 1, wherein said inflow chamber has an inlet in the upper part thereof and a portion of said structure directs the fluid that has flown in from said inlet toward the lower part of said inflow chamber, directs it toward the bottom portion of said inflow chamber, causes it to rise from the bottom portion, and guides it so that it falls upon the filter element.

Claim 3 (Previously Presented): The filter for trapping foreign matter according to claim 2, wherein the cross section area of a flow path between said portion of said structure and the bottom

U.S. Patent Application Serial No. 10/802,027

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surface of said inflow chamber is narrowed so as to increase the flow velocity of said fluid.

Claim 4 (Previously Presented): The filter for trapping foreign matter according to claim 1, wherein said inflow chamber has an inlet in the bottom portion thereof and is constructed so that the flow of the fluid that has flown from the inlet into said inflow chamber rises from said bottom portion.

Claim 5 (Previously Presented): The filter for trapping foreign matter according to claim 4, wherein said structure forcibly guides to said filter element the rising flow of the fluid that has flown from the bottom portion of the inlet into said inflow chamber.

Claim 6 (Previously Presented): The filter for trapping foreign matter according to claim 1, wherein said inflow chamber has a streamline shape preventing the stagnation of the fluid.

Claim 7 (Previously Presented): The filter for trapping foreign matter according to claim 1, further comprising a differential pressure sensor for detecting the difference in pressure between said inflow chamber and said outflow chamber.

Claim 8 (Currently Amended): A filter for trapping foreign matter comprising:
an inflow chamber into which a fluid flows;

U.S. Patent Application Serial No. 10/802,027

Amendment filed August 6, 2007

Reply to OA dated May 16, 2007

an outflow chamber from which flows the fluid that has flown into said inflow chamber; and
a filter element of a substantially cylindrical shape partitioning said two chambers, wherein
a guide for forcibly guiding the flow of the fluid that has flown into said inflow chamber in
a taper-like fashion toward the substantially cylindrically shaped surface of said filter element is held
inside said inflow chamber.

Claim 9 (Previously Presented): The filter for trapping foreign matter according to claim 8,
further comprising a differential pressure sensor for detecting the difference in pressure between said
inflow chamber and said outflow chamber.

Claim 10 (Currently Amended): A filter for trapping foreign matter comprising:
an inflow chamber into which a fluid flows;
an outflow chamber from which flows the fluid that has flown into said inflow chamber and
a filter element partitioning said two chambers, wherein
said filter element comprises:
a target trapping element for trapping foreign matter which is the target, said target trapping
element having a mesh size smaller than a size of the target foreign matter; and
a fall-off preventing element, having a mesh size slightly larger than the size of the target
foreign matter, for preventing said foreign matter which is the target trapped by said target trapping
element from falling off, the fall-off preventing element being provided on the side surface of the

U.S. Patent Application Serial No. 10/802,027

Amendment filed August 6, 2007

Reply to OA dated May 16, 2007

inflow path of said target trapping element, the target trapping element and the fall-off preventing element trapping the foreign matter ~~therebetween~~ within the fall-off preventing element.

Claim 11 (Previously Presented): The filter for trapping foreign matter according to claim 10, further comprising a differential pressure sensor for detecting the difference in pressure between said inflow chamber and said outflow chamber.

Claim 12 (Previously Presented): The filter for trapping foreign matter according to claim 8, further comprising a differential pressure sensor for detecting the difference in pressure between said inflow chamber and said outflow chamber .